Docket No.: 238023US0X

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Juergen KOCH, et al.

GROUP: 1713

SERIAL NO: 10/692,753

EXAMINER: Harlan, R.

FILED: October 27, 2003

FOR: ISODECYL BENZOATE MIXTURES, PREPARATION, AND THEIR USE

DECLARATION UNDER 37 C.F.R. 1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Sir:

Now comes Michael Graß who deposes and states that:

1. I am a graduate of chemistry and received my doctorate degree in the year 1995.

2. I have been employed by Oxeno Olefinchemie GmbH for 9 years as a Manager in the field of Application Technology of Plasticizers.

3. The following experiments were carried out by me or under my direct supervision and control.

4. Example A:

The esterification described in Example 2 was repeated using a 98% pure 2-propylheptanol instead of the alcohol mixture used in that example.

The glass transition temperature (T_G) of the corresponding benzoate ester was measured by means of TBA according to Example 7. The T_G was found to be -93 °C.

5. Example B:

A mixture of 17% 2-Isopropyl-5-methyl-hexanol-1, 71% 2-Propyl-5-methylhexanol-1, 4% 2-Isopropyl-heptanol-1 and 7% 2-Propylheptanol was mixed in a mass ratio of 1:1 with the alcohol used in Example A. The resulting mixture consisted of 52% 2-propylheptanol. This

new mixture was used to esterify benzoic acid according to the procedure described in Example 2.

The T_G of this isodecyl benzoate was -91.3 °C, which is still superior with regard to the T_G of the comparative Example 3 (using Exxal 10 as alcohol).

6. Test Report according to DIN EN ISO/IEC 174025 showing that Exxal 10 (iso-Decanol) contains a maximum of 3.6% 2-propyl heptanol.

First, the Exxal 10 sample (see attachment describing Exxal 10) was diluted in methanol 1:10 and then analyzed. After recording the chromatogram a known portion of 2-propylheptanol was added to the sample and analyzed again to clearly identify the peak of 2-propylheptanol. These data are shown in the attached chromatograms.

	Peak with RT of 2-propylheptanol in the sample Exxal 10	Peak with RT of 2-propylheptanol in the sample Exxal 10 added with 2-propylheptanol
Area %	3.6	5.0

The identification of the signal for 2-propylheptanol was done only by comparing retention times. The content of 3.6% therefore is a maximum value. If another component superimposes this signal the real content of 2-propylheptanol would be even lower.

7. The above data were obtained by analyzing an Exxal 10 sample using the following equipment, parameters and method:

Apparatus:	Gas chromatograph with FID and integrator, e.g. Agilent gas chromatograph 5890 and integrator 3396 of Agilent ChemStation software.
Column:	fused silica capillary column
Stationary phase:	polyethylene glycol, e.g. Stabilwax, Restek
Length:	60 m
Internal diameter:	0.25 mm
Film Thickness:	0.25 µm
Carrier gas:	helium

Column head pressure: 200 kPa

Column flow rate: *ca.* 2 ml/min

Split: *ca.* 100 ml/min

Temperatures:

Oven temperature: 60°C - 2°C/min-220°C

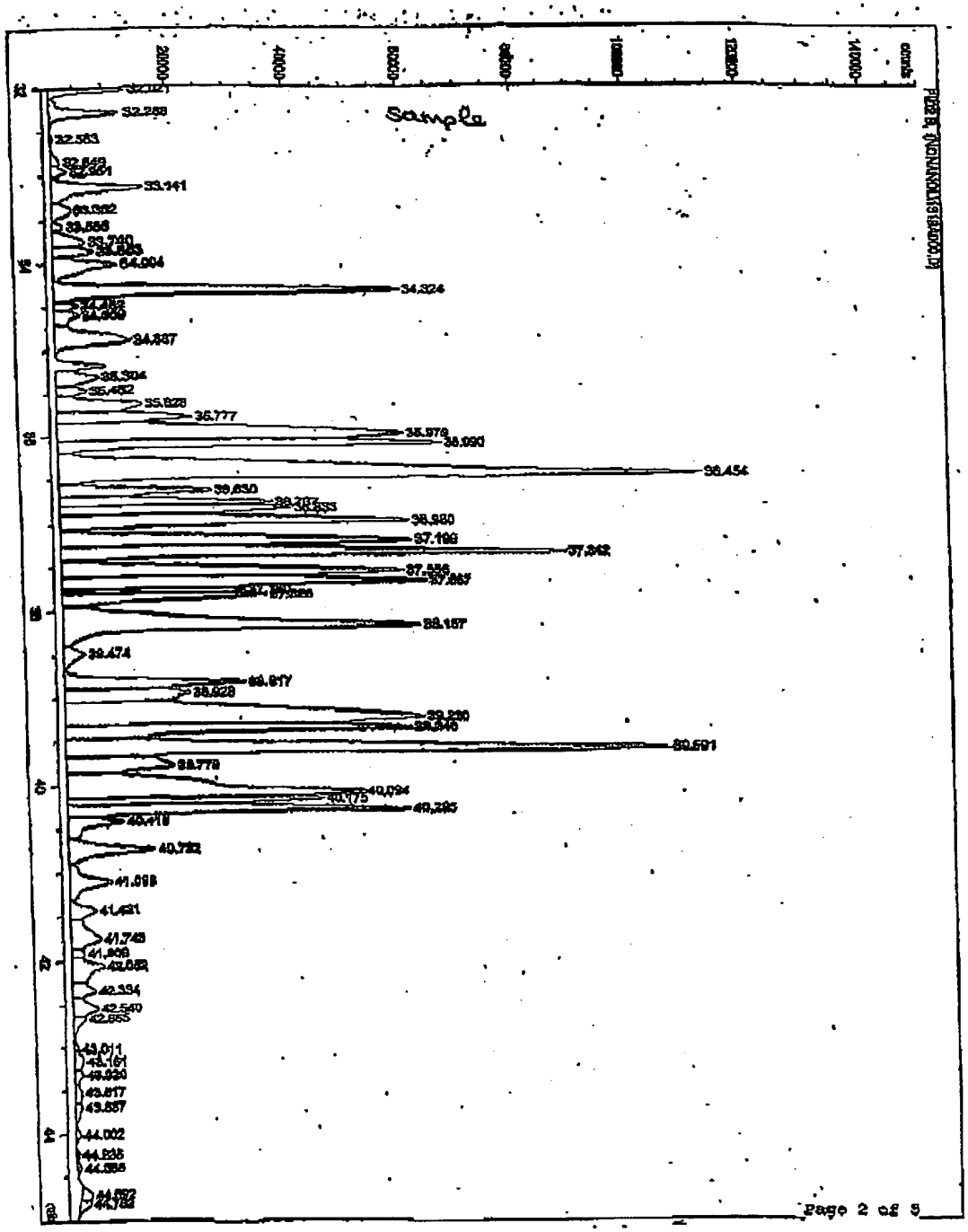
Injector temperature: 225°C

Detector temperature: 225°C

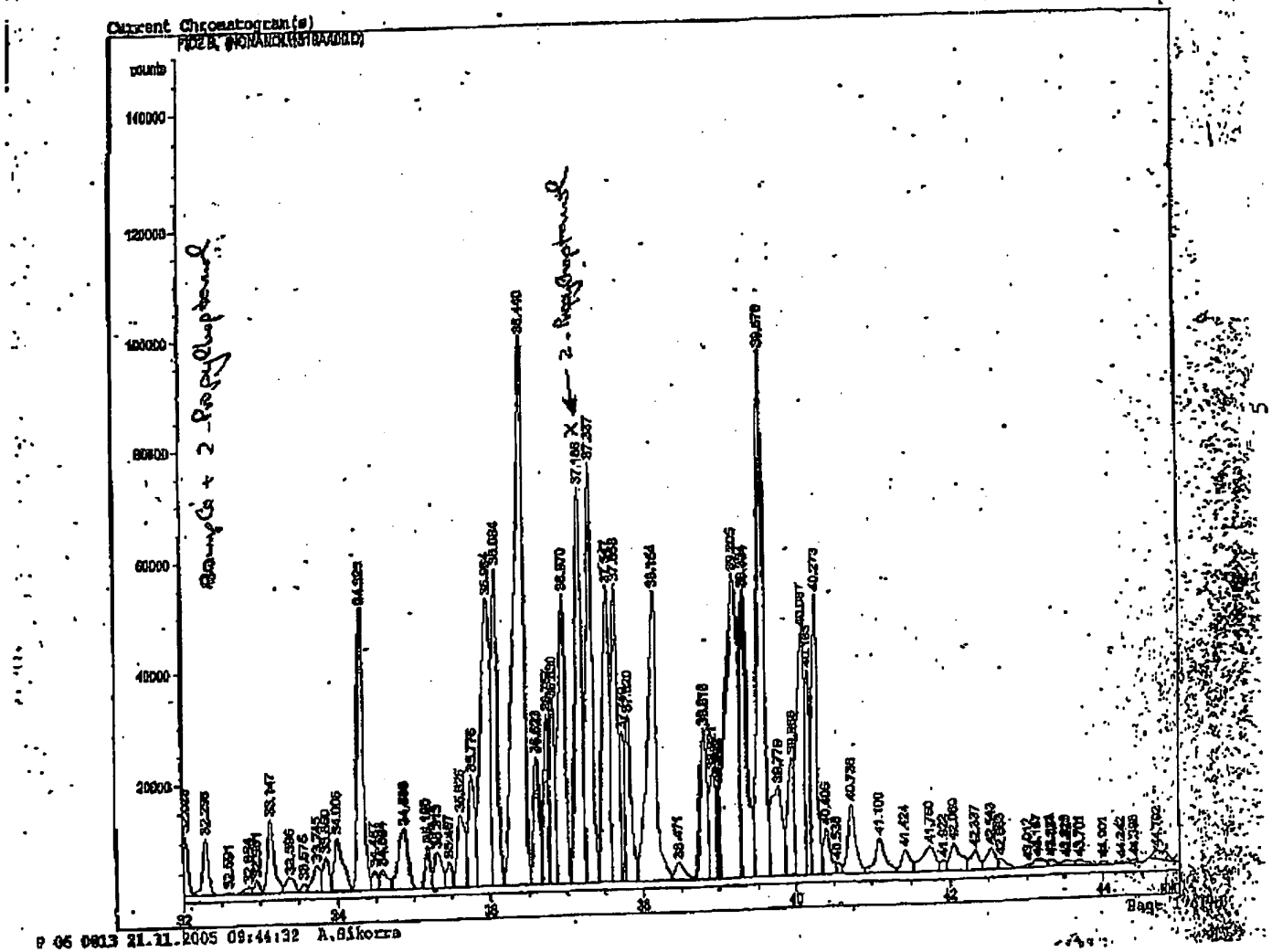
Sample volume injected: 0.4 µm diluted in methanol (1:10)

Evaluation: normalization to 100 area-%

8.

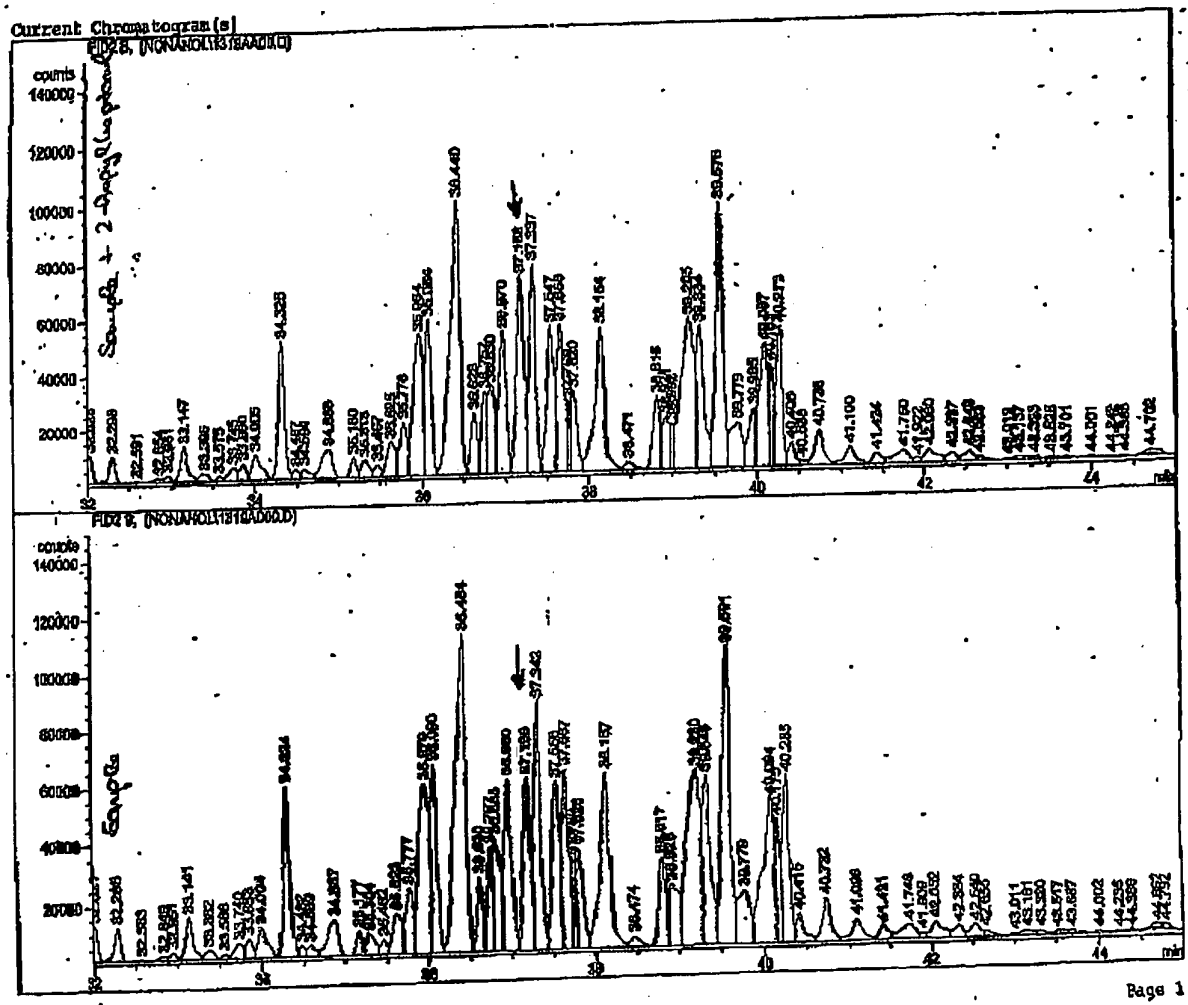


Print of Window 38: Current Chromatogram(s)



P 06 0813 21.11.2005 09:44:32 A.Sikorra

Print of window.36: Current Chromatogram(s)



9.

Higher Alcohols

From August 2005 to August 2006

ExxonMobil Chemical

Exxal 10

Isodecanol ($C_{10}H_{22}O$)

CAS Number: 93821-11-5
EINECS Number: 2986966

Specifications

Property	Units	Min	Max	Typical values	Test method
Purity	wt% total alcohols	99.0		99.6	ROP 103/04
Carbonyl number	mgKOH/g		0.20	0.10	ISO 1843-3/77
Acid value	mgKOH/g		0.05	0.03	ASTM D-1045/95*
Distillation - Initial - Dry point	°C	 216	 226	 218 224	ASTM D-1078/03*
Colour	Pt-Co		10	6	ASTM D-1209/00
Density at 20°C	g/cm³	0.836	0.840	0.838	ASTM D-4052/96
Water content	wt%		0.10	0.03	ASTM E-1064/04a

* Modified. Value may be determined by ExxonMobil procedures equivalent to industry standard test methods. Applicable sampling and testing methods are subject to change without notice and are available for review on request.

Europe August 2005 HA 040

8

10. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

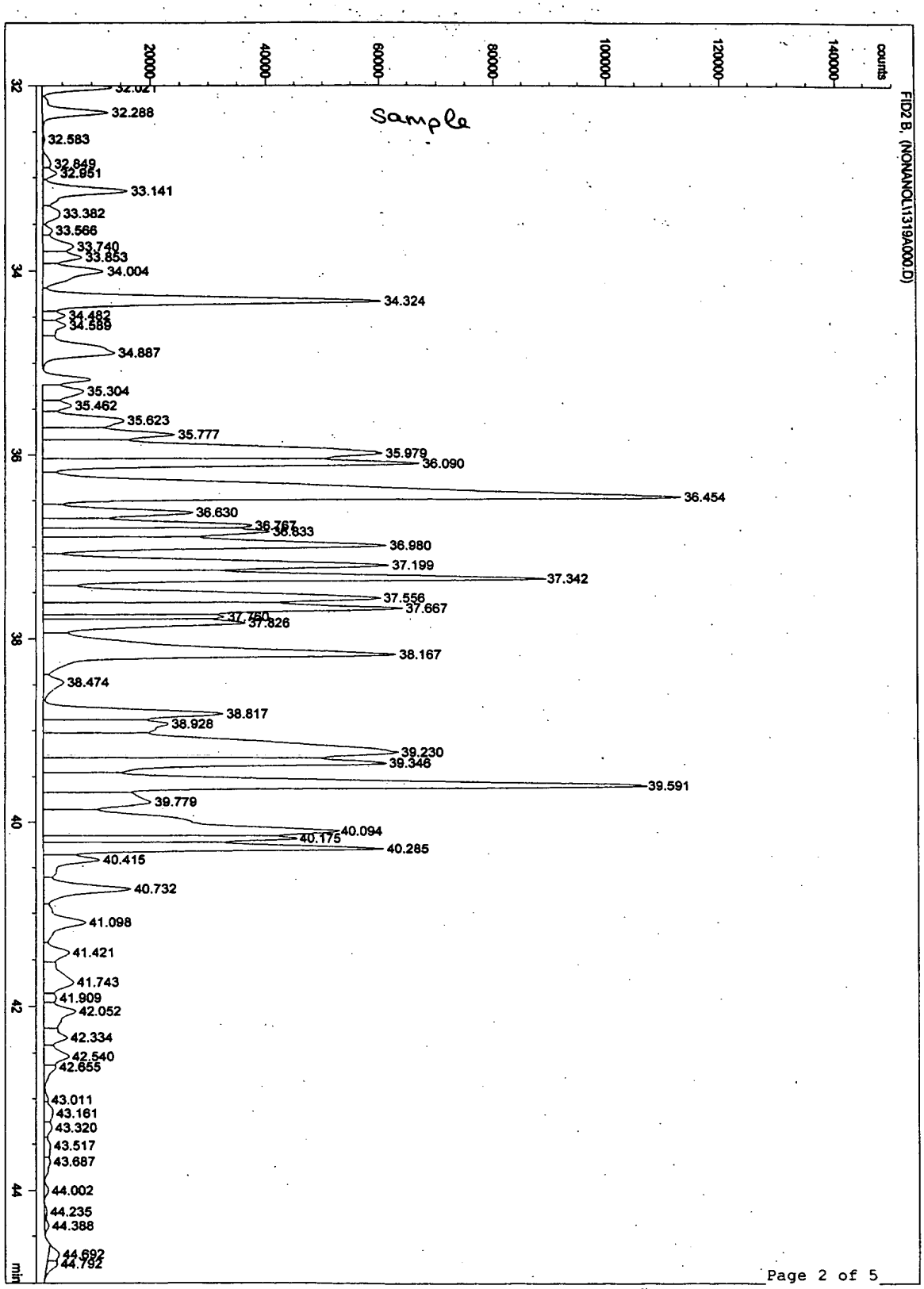
11. Further deponent saith not.

Signature

December 8th, 2005

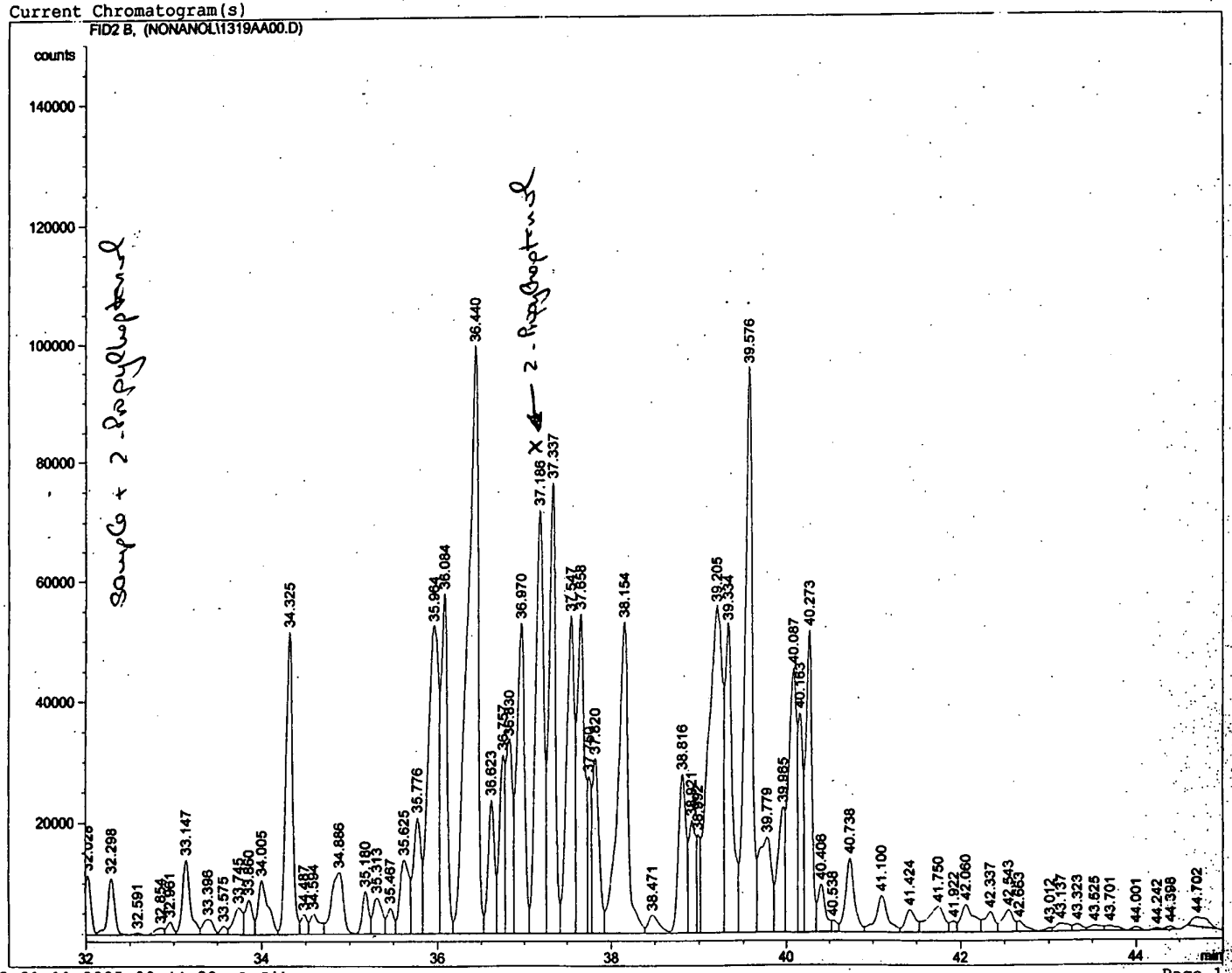
Date

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OSMMN 07/05)
I:\ATTY\TMC\236023US-DEC132.DOC


20000
40000
60000
80000
100000
120000
140000
counts
FID2 B, (NONANOL\1319A000.D)
Sample
32.021
32.288
32.583
32.849
32.951
33.141
33.382
33.566
33.740
33.853
34.004
34.324
34.482
34.589
34.887
35.304
35.462
35.623
35.777
35.979
36.090
36.454
36.630
36.767
36.833
36.980
37.199
37.342
37.556
37.667
37.760
37.826
38.167
38.474
38.817
38.928
39.230
39.348
39.591
39.779
40.094
40.175
40.285
40.415
40.732
41.098
41.421
41.743
41.909
42.052
42.334
42.540
42.655
43.011
43.161
43.320
43.517
43.687
44.002
44.235
44.388
44.692
44.792
min

Print of window 38: Current Chromatogram(s)

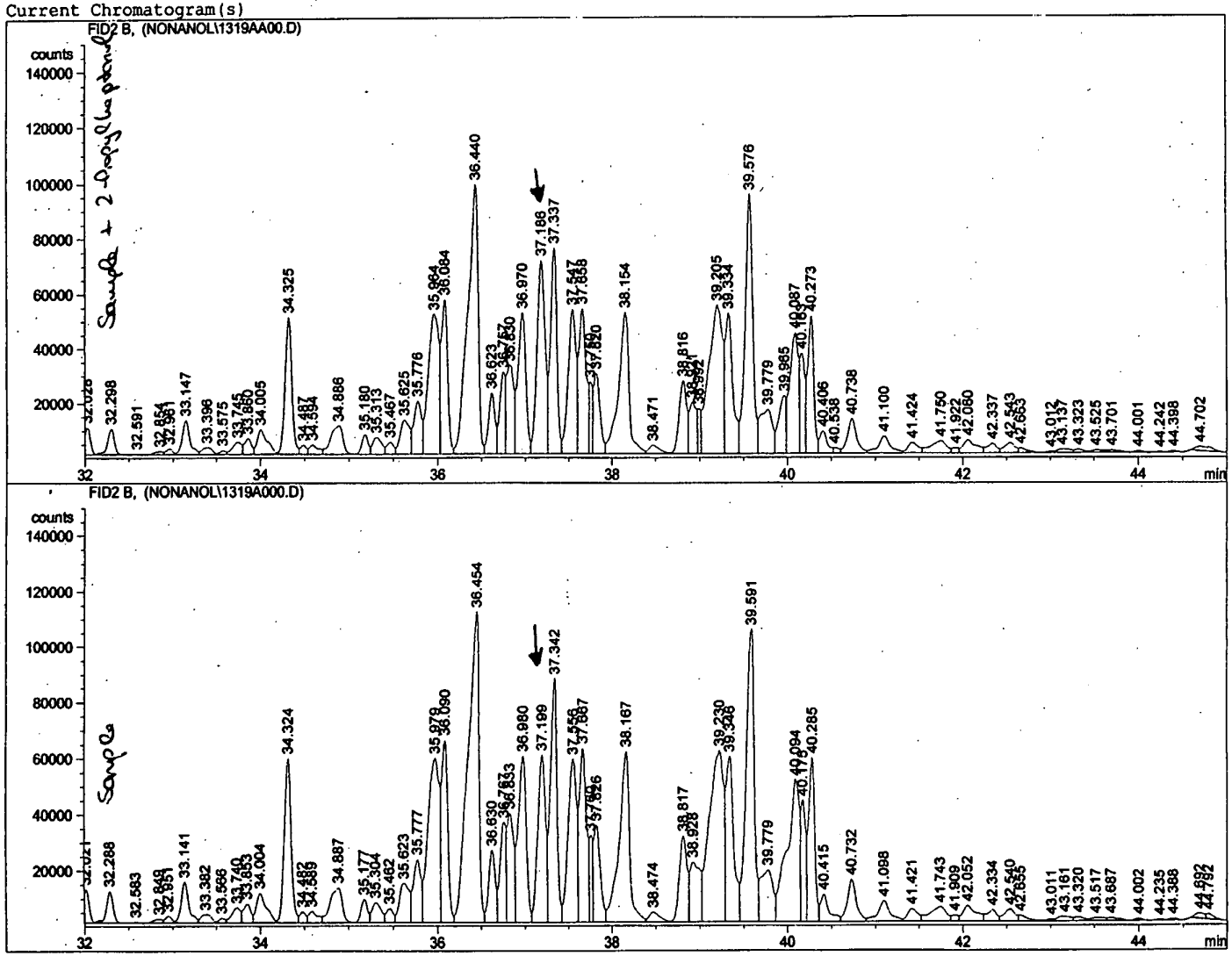
Current Chromatogram(s)



P 06 0013 21.11.2005 09:44:32 A.Sikorra

Print of window 38: Current Chromatogram(s)

Current Chromatogram(s)



This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.
As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.